

New Study of Cancer Easier on Cigarettes

By Robert C. Toth

South Africans are the heaviest smokers in the world. Yet they have less lung cancer than the lighter-smoking Britons. This has impressed many doctors as a paradox in view of the cancer-smoking statistical links that have been reported in recent years. Looking into it, a South African doctor has done a scientific study that indicts air pollution—smoke, smog, auto exhaust—as a major factor in the rising lung-cancer rate in his country, Britain, "and presumably elsewhere."

The doctor, Geoffrey Dean, suggests that the air pollutants may be more important than cigarette smoking in causing cancer.

Other Factors Suggested

Commenting on Dr. Dean's study, which appeared in "The British Medical Journal," the American Cancer Society's chief statistician, Dr. E. Cuyler Hammond, said it was "an excellent paper, well done."

Dr. Hammond contended that a survey of South Africans would show smokers get lung cancer more often than non-smokers. But he acknowledged that other factors—such as climate, occupation and air pollution—must be involved in the paradox of heavy smokers having relatively low cancer rates, and vice versa.

In his research, Dr. Dean compared the cancer rates among native-born South African white men with those of British white men who migrated to South Africa. The British immigrants were presumably exposed to more air pollutants because they had lived in the heavily industrialized British Isles.

He found 44 per cent more cancer deaths among the British immigrants than among the native-born.

This difference in rate could not be explained away by a difference in cigarette consumption, he said. The immigrants smoked the same amount as the native-born (about twenty-four cigarettes a day).

Yet the lung cancer rate in South Africa has doubled between 1946 and 1957, Dr. Dean said. He reasoned that if air pollution was a major factor, it would show up in a comparison of rural and city dwellers, the rural farmers presumably having been breathing cleaner air.

The most highly industrialized city in South Africa is Dur-

ban. Dr. Dean found the cancer rate among British immigrants in Durban to be twice that of British immigrants living in the rural areas. Moreover, it was five times that of native-born South Africans in rural areas. Dr. Dean concluded that lung cancer is caused both by genetic and environmental factors, with environment "chiefly responsible for the high incidence of the disease. There is evidence from other studies that cigarette smoking is such (an environmental) factor.

"However, the relatively low incidence of lung cancer generally among the heavy-smoking South African men, the higher and rapidly rising incidence in the growing cities, and the high incidence in the younger age group of immigrants from Britain, found in the present study, suggest that the air pollution which occurs in modern industrial life—smoke, smog, traffic fumes, etc.—may be a major factor responsible for the alarming increase of lung cancer in South Africa and Britain, and presumably elsewhere," he said.

United States smokers are much like the South Africans. They smoke more than the British, but have a lower cancer rate.

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